

HONEY BADGER PROJECT
Project File Document W-036
American Wolverine Habitat Analysis
October 6, 2021

Habitat Relationships

Wolverines are a low density, wide-ranging species occurring over a wide variety of alpine, boreal and arctic habitats. They are primarily scavengers but will also hunt small animals and birds, and eat fruits, berries, and insects (Hornocker and Hash 1981). The southern portion of the species' range extends into high-elevation portions of Washington, Idaho, Montana, Wyoming, California, and Colorado. While Hornocker and Hash (1981) reported that wolverines tended to use lower elevations in the winter and higher elevations in summer, more recent research (Copeland et al. 2010) states that in montane habitats at southerly latitudes, wolverines remain at high elevations throughout the year. Instead, the presence of persistent spring snow cover (i.e., snow cover from April 24 through May 15) has been determined to define wolverine habitat year-round (Aubry et al. 2007). A review of wolverine research in nine radiotelemetry study areas revealed that approximately 95% of summer locations and 86% of winter locations fell within areas that had persistent spring snow cover at least one of seven years (Copeland et al. 2010).

Affected Environment

Current wolverine populations and trends in the contiguous United States are unknown. The scarcity of information is largely due to the difficulty and expense in studying an animal that is solitary and secretive and found mostly in remote areas at low densities. The U.S. Fish and Wildlife Service (USFWS) estimates that approximately 250 to 300 individuals occupy this area, with the bulk occurring in the Northern Rockies (USDI 2013).

In 2013, the USFWS proposed listing the Northern Rockies distinct population segment of North American wolverine under the Endangered Species Act (USDI 2013). However, based on their review of the best available scientific and commercial information, they determined that wolverine appear to be little affected by habitat modifications and changes to the vegetative characteristics derived from land management activities such as timber harvest and prescribed fire. Furthermore, the proposed rule determined that the types of forest roads associated with wolverine habitat are unlikely to affect wolverine movement. Consequently, it was determined that these types of land management activities would not significantly affect the conservation of the United States population of wolverine (USDI 2013). On August 13, 2014, the USFWS withdrew its proposal to list the wolverine, finding that current and future factors affecting wolverine were, "not of sufficient imminence, intensity or magnitude to indicate that the wolverine is in danger of extinction (endangered), or likely to become endangered within the foreseeable future (threatened)" (USDI 2014).

Mapping of wolverine habitat in the Northern Region of the Forest Service is based on the work of Inman et al. (2013), which used radio-telemetry data collected in the Yellowstone Region of the United States and Resource Selection Function (RSF) modelling. This work produced four habitat layers: maternal habitat, primary habitat, female dispersal habitat, and male dispersal habitat. These Regional habitat layers were overlaid with the action area for the project. The proposed treatment under alternative 2 was then overlaid with the maternal, primary, and dispersal habitat layers for the action area and acreage was estimated.

Rationale for No Further Analysis

The Honey Badger project is located on a portion of National Forest System lands characterized by open roads, and past timber harvest. While these areas could provide foraging opportunities for wolverine, they do not represent the secure habitat that wolverine seem to prefer. According to the RSF modelling, no maternal or primary habitat is present in the project area. Male dispersal habitat is roughly estimated at 30,500 acres with 12,231 acres in treatment units while female dispersal includes approximately 706 acres with 71 acres in treatment units (Wildlife Project File W-020). There are no confirmed observations of wolverines in the project area.

Given their wide-ranging nature, it is not unreasonable to assume wolverines may be present, although their presence is likely to be transitory. However, any disturbance to wolverine as a result of project activities would be temporary, and ample displacement habitat is available in adjacent areas. The habitat changes as a result of the Honey Badger Project would have minor effects on this species. The effects to habitat would be minimal relative to the scale of a wolverine home range (approximately 34,840 to 122,564 acres (141 to 496 km²) in Glacier National Park, MT (USDI 2013). As a result, potential impacts to wolverine or their habitat would be discountable (small in scale) and would not be considered to be a threat to the persistence of the species.

Ongoing activities in the project area that likely will continue include firewood gathering, recreational activities, fire suppression and remaining fuels project activities authorized under more recently completed NEPA decisions. Activities that occur in wolverine habitat have the potential to disturb this species. As these activities are occurring and are expected to continue in the future, it is unlikely that this species would avoid these areas to a greater degree than what may be currently occurring. When these effects are combined with the temporary disturbance associated with the proposed Honey Badger Project, the cumulative impact on wolverine is expected to be insignificant.

Consequently, the proposed action in conjunction with past, present, and reasonably foreseeable actions, ***may impact individuals or their habitat, but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species.***

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LIST OF REFERENCES CITED

Aubry, Keith B., Kevin S. McKelvey, and Jeffrey P. Copeland. 2007. Distribution and broadscale habitat relations of the wolverine in the contiguous United States. *J. Wildl. Manage.* 71: 2147-2158.

Copeland, J.P., K.S. McKelvey, K.B. Aubry, A. Landa, J. Persson, R.M. Inman, J. Krebs, E. Lofroth, H. Golden, J.R. Squires, A. Magoun, M.K. Schwartz, J. Wilmot, C.L. Copeland, R.E. Yates, I. Kojola, and R. May. 2010. The bioclimatic envelope of the wolverine (*Gulo gulo*): do climatic constraints limit its geographic distribution? *Can. J. Zool.* 88: 233-246.

Hornocker, M.G. and H.S. Hash. 1981. Ecology of the wolverine in Northwestern Montana. Idaho Cooperative Wildlife Research Unit, College of Forestry, Wildlife and Range Sciences, Univ. of Idaho, Moscow, ID. In *Canadian Journal of Zoology*, vol. 59. 15 p.

Inman, R.M., B.L. Brock, D.H. Inman, S.S. Sartorius, B.C. Aber, B. Giddings, S.L. Cain, M.L. Orme, J.A. Fredrick, B.J. Oakleaf, K.L. Alt, E. Odell, and G. Chapron. 2013. Developing priorities for metapopulation conservation at the landscape scale: Wolverines in the Western United States. *Biological Conservation* 166: 276-286.

USDI Fish and Wildlife Service. 2013. Federal Register Part II: Department of the Interior, Fish and Wildlife Service, 50 CFR Part 17, Endangered and Threatened Wildlife and Plants; Endangered and Threatened Wildlife and Plants; Threatened Status for the Distinct Population Segment of the North American Wolverine Occurring in the Contiguous United States; Establishment of a Nonessential Experimental Population of the North American Wolverine in Colorado, Wyoming, and New Mexico; Proposed Rules. *Federal Register* Vol. 78, No. 23, Monday, February 4, 2013, pages 7864 – 7890.

USDI Fish and Wildlife Service. 2014. Federal Register Part II: Department of the Interior, Fish and Wildlife Service, 50 CFR Part 17, Endangered and Threatened Wildlife and Plants; Threatened Status for the Distinct Population Segment of the North American Wolverine

Occurring in the Contiguous United States; Establishment of a Nonessential Experimental Population of the North American Wolverine in Colorado, Wyoming, and New Mexico. Proposed Rules, Withdrawal. Federal Register Vol. 79, No. 156, Wednesday, August 13, 2014, pages 47522-47545.